R3G200-BI21-06

EC centrifugal fan

backward curved

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G200-BI21-06**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	3750
Power input	W	160
Current draw	A	1.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	42.9	28.1	31.1
Efficiency grade N		61.8	47	50
Power input P_{ed}	kW	0.16		
Air flow q_v	m^3/h	640		
Pressure increase p_{fs}	Pa	350		
Speed n	min^{-1}	3825		

Data definition with optimum efficiency. LU-141721
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

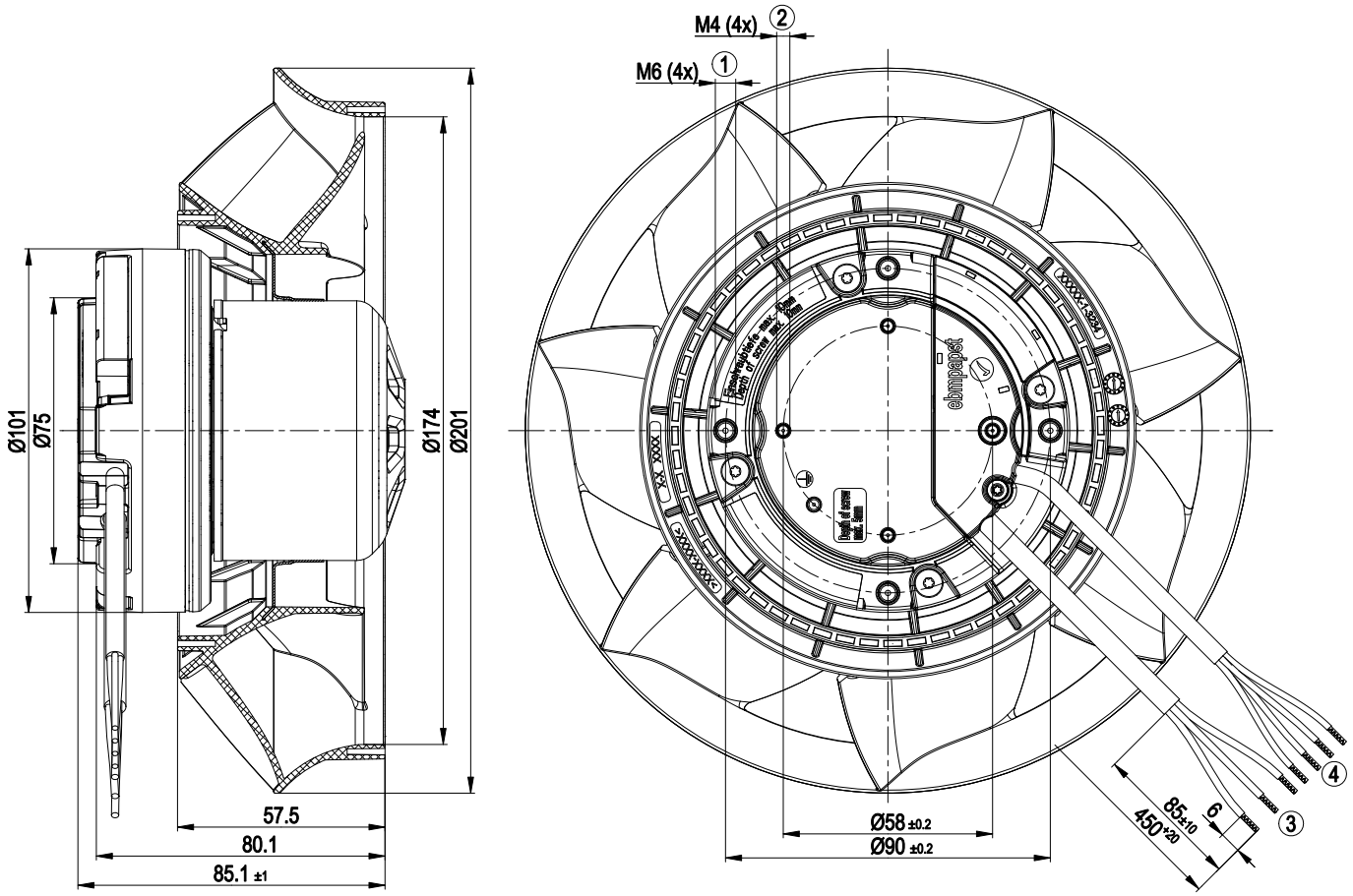
Mass	1.5 kg
Size	200 mm
Surface of rotor	Thick layer passivated
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1
Approval	UL 2111; CSA C22.2 Nr.77

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Product drawing



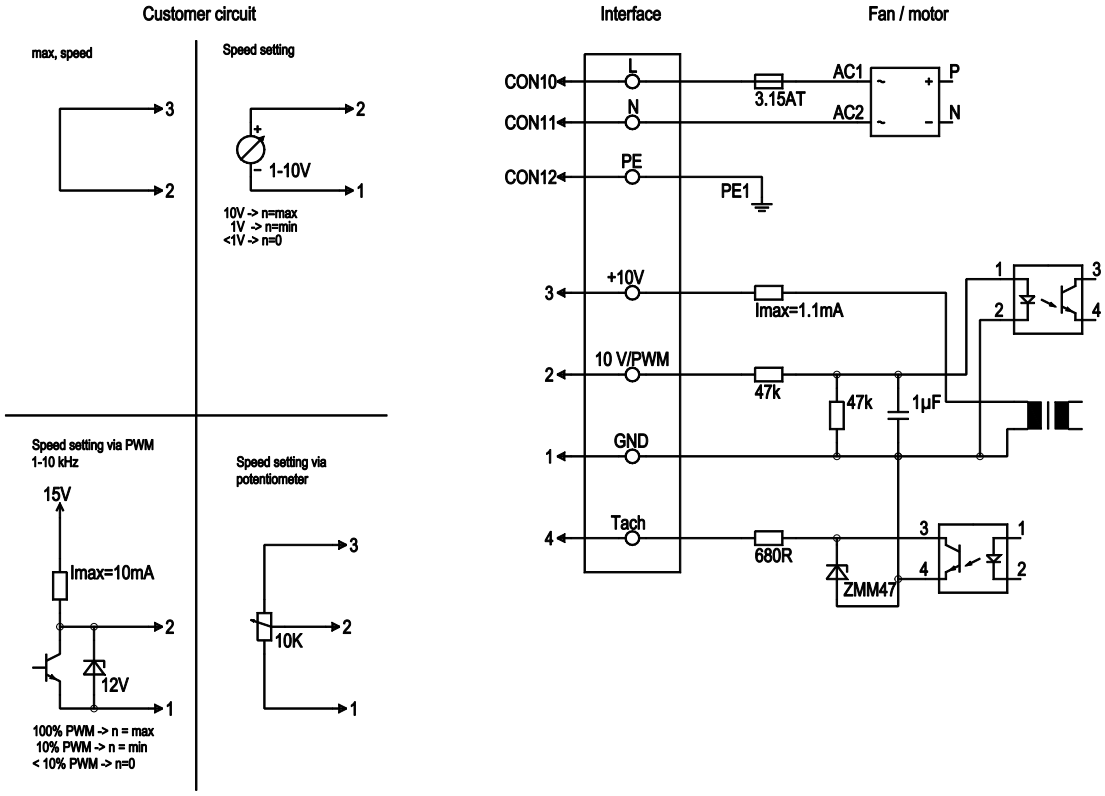
1	Depth of screw max. 10 mm
2	Depth of screw max. 5 mm
3	Connection line PVC 3G AWG20, 3x brass lead tips crimped
4	Connection line PVC 4X AWG22, 4x brass lead tips crimped

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Connection screen



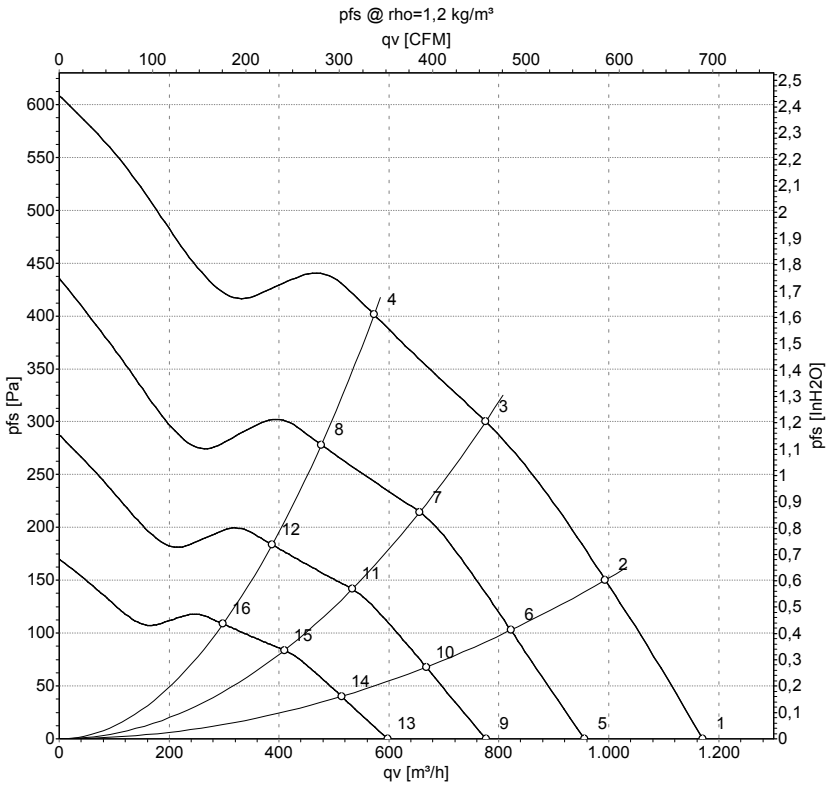
No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, for voltage range refer to rating plate
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND - Connection for control interface
	2	0- 10V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10V/ 1.1mA, electrically isolated, not short-circuit-proof.
	4	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated

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Charts: Air flow 50 Hz



Measurement: LU-141721

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	3920	146	1.14	71	78	1170	0
2	230	50	3870	157	1.23	67	75	995	150
3	230	50	3800	170	1.30	66	74	775	300
4	230	50	3845	164	1.27	70	78	575	400
5	230	50	3200	79	0.62	65	73	955	0
6	230	50	3200	89	0.70	63	70	820	103
7	230	50	3200	100	0.78	62	70	655	215
8	230	50	3200	94	0.73	65	73	475	278
9	230	50	2600	42	0.33	60	68	775	0
10	230	50	2600	48	0.37	57	65	670	68
11	230	50	2600	53	0.42	57	65	535	142
12	230	50	2600	51	0.39	60	68	390	184
13	230	50	2000	19	0.15	54	61	595	0
14	230	50	2000	22	0.17	51	59	515	40
15	230	50	2000	24	0.19	50	58	410	84
16	230	50	2000	23	0.18	53	61	300	109

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow
p_{fs} = Pressure increase

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